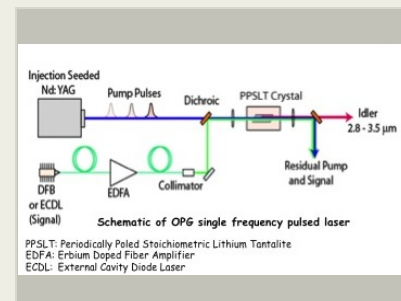## Project Introduction

Advance the state of the art in continuous wave and pulsed IR distributed feedback (DFB) and optical parametric generation (OPG) lasers between 2.8 and 3.5 μm to measure key atmospheric chemical species including OH, H_2O, $H_2^{18}O$, HDO, CH_4, $^{13}CH_4$, CO_2, $^{13}CO_2$, CH_2O, C_2H_6.
Combine new lasers with integrated optics and electronics to enable the use of new single mode light sources aboard satellite and UAV platforms to support GACM and ASCENDS.

Primary U.S. Work Locations and Key Partners
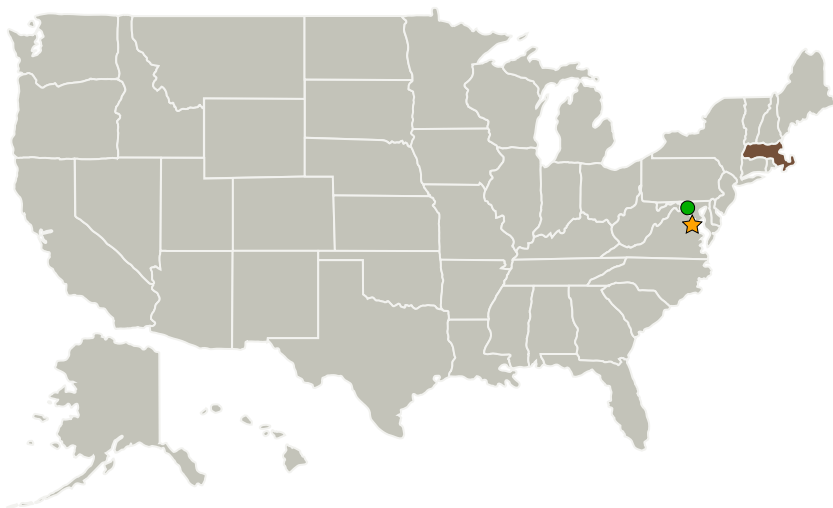
Organizations Performing Work	Role	Type	Location
⭐NASA Headquarters(HQ)	Lead Organization	NASA Center	Washington, District of Columbia
🟢Goddard Space Flight Center(GSFC)	Supporting Organization	NASA Center	Greenbelt, Maryland
Harvard University	Supporting Organization	Academia	Petersham, Massachusetts

Project Image High Power Mid-IR Laser Development 2.8 to 3.5 Microns

Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Science Mission Directorate (SMD)

Lead Center / Facility:

NASA Headquarters (HQ)

Responsible Program:

Earth Science

For more information and an accessible alternative, please visit:
https://techport.nasa.gov/view/10469

Primary U.S. Work Locations
Massachusetts

Images
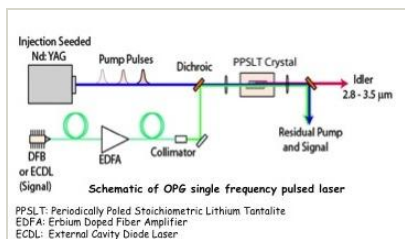
10469-1360021407702.jpg
Project Image High Power Mid-IR
Laser Development 2.8 to 3.5
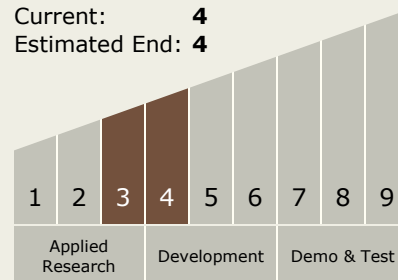Microns
*(https://techport.nasa.gov/imag
e/1580)*

Project Management

Program Director:

George J Komar

Principal Investigator:

James N Anderson

Technology Maturity (TRL)

Start: **3**
Current: **4**
Estimated End: **4**

1	2	3	4	5	6	7	8	9
Applied Research			Development			Demo & Test		

Technology Areas

Primary:

- TX08 Sensors and Instruments
  └ TX08.1 Remote Sensing Instruments/Sensors
    └ TX08.1.5 Lasers

Target Destination
Earth